

## **REMARKS**

**[0002]** Applicant respectfully requests reconsideration and allowance of all of the claims of the application. Claims 1, 3-5, and 7-37 are presently pending. Claims amended herein are 1, 4-5, 9, 11, 13, 16-17, 20, 22, 28, 30, 35. Claims withdrawn or cancelled herein are 2 and 6. No new claims are added herein.

### **Allowable Subject Matter**

**[0003]** Applicant would like to thank the Examiner for allowing claims 20-37. Although allowed, Applicant amends claims 20, 22, 28, 30, and 35 to be sure that they meet § 112 and § 101 standards.

### **Claim Amendments**

**[0004]** Without conceding the propriety of the rejections herein and in the interest of expediting prosecution, Applicant amends claims 1, 4-5, 9, 11, 13, 16-17, 20, 22, 28, 30, 35 herein. Applicant amends claims to clarify claimed features. Such amendments are made to expedite prosecution and more quickly identify allowable subject matter. Such amendments are merely intended to clarify the claimed features, and should not be construed as further limiting the claimed invention.

**[0005]** Support for the amendments to claims 1 and 13 is found in the specification at least at pages 6-9 and 36. Support for the amendments to claim 9 is found in the specification at least at pages 15-16 and 36. Support for the amendments to claim 20 and 35 is found in the specification at least at page 36. Support for the amendment to claim 28 is found in specification at least at pages

16-17 and 36. Amendments to claims 1, 4-5, 9, 11, 13, 16-17, 22, and 30 are to correct the term represented incorrectly by "a" and correctly by "α".

## **Substantive Matters**

### **Claim Rejections under § 112 2<sup>nd</sup> ¶**

**[0006]** The Action indicates, "Claims 1 and 13 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 1 recites  $\alpha$ , which is a private key, and this key is being generated based on itself.....Claim 13 recites  $m$ , but fails to define what  $m$  is. That is,  $m$  is defined as order of torsion points as recited in claim 1, but is not included in the recitation of claim 13", (Action, p. 3).

**[0007]** Applicant amends claim 1 to further clarify the definitions of the mathematical notations used in the calculation of private key  $\alpha$ . Applicant further amends claim 13 to include the definition of  $m$  as recited in claim 1.

**[0008]** In light of the amendments presented herein, Applicant submits that these rejections are moot. Accordingly, Applicant asks the Examiner to withdraw these rejections.

### **Claim Rejections under § 101**

**[0009]** The Action indicates, "Claims 9-12 are rejected under 35 U.S.C. § 101 "because the invention is directed to non-statutory subject matter. The claims do not produce a tangible result, that is, the calculations result in a cipher, which is not directed to a tangible result. The claim appears to be reduced to a mathematical calculation, and does not express(ly) state the purpose of the calculation (i.e. producing signature similar to Claim 1", (Action, p. 2).

**[0010]** Claim 9 is amended herein to address the concerns expressed by this rejection:

- “for facilitating enhanced security of a computing system without increasing a length of the short digital cipher”; and
- “whereby the forging enhances securing of a computing system without increasing a length of the short digital cipher.”

**[0011]** In light of the amendments presented herein, Applicant submits that these rejections are moot. Accordingly, Applicant asks the Examiner to withdraw the rejections to these claims.

**[0012]** Furthermore, claims 10, 11, and 12 ultimately depend upon independent claim 9. As discussed above, claim 9 is allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

**[0013]** The Action indicates, “Claims 1, 3-5, 7-12, 20-27, 35-37 are rejected under 35 U.S.C. § 101 as directed to non-statutory subject matter. The instant claims recite, ‘computer readable medium’ which are defined on page 37 as including “communication media’, see lines 18-19”, (Action p. 3).

**[0014]** Applicant amends the specification to remove the phrase, “and ‘communications media’” as it appears on page 36. Furthermore, Applicant amends claim 1, 9, 20, and 35 to read “a computer-readable storage medium”,

as supported by the application at least at page 31. Both of these changes should make it clear that the subject-matter of these claims is not a signal.

**[0015]** In light of the amendments presented herein, Applicant submits that these rejections are moot. Accordingly, Applicant asks the Examiner to withdraw the rejections to these claims.

**[0016]** Furthermore, claims 3-5 and 7-8 ultimately depend upon independent claim 1, claims 10-12 ultimately depend upon independent claim 9, claims 21-27 ultimately depend upon independent claim 20, and claims 36-37 ultimately depend upon independent claim 35. As discussed above, independent claims 1, 9, 20 and 35 are allowable. It is axiomatic that any dependent claim which depends from an allowable base claim is also allowable. Additionally, some or all of these claims may also be allowable for additional independent reasons.

**Conclusion**

[0017] All pending claims are in condition for allowance. Applicant respectfully requests reconsideration and prompt issuance of the application. If any issues remain that prevent issuance of this application, the **Examiner is urged to contact me before issuing a subsequent Action**. Please call or email me at your convenience.

Respectfully Submitted,

Lee & Hayes, PLLC  
Representatives for Applicant

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